

The following sample exam for Aviation Maintenance Technician Airframe (AMA) is suitable study material to satisfy the airframe portion of the Aviation Maintenance Technician test. These questions are a representation of questions that can be found on AMA test. The applicant must realize that these questions are to be used as a study guide, and are not necessarily actual test questions. The full AMA test contains 100 questions. The Application Identification, Information Verification and Authorization Requirements Matrix lists all FAA exams. It is available at: http://www.faa.gov/training_testing/testing/airmen/media/testing_matrix.pdf

The FAA testing system is supported by a series of supplement publications. These publications include the graphics, legends, and maps that are needed to successfully respond to certain test questions. FAA-CT-8080-4, Computer Testing Supplement for Aviation Mechanic General, Powerplant, and Airframe; and Parachute Rigger is available at: http://www.faa.gov/training_testing/testing/airmen/test_questions/media/FAA-CT-8080-4E.pdf

The Learning Statement Reference Guide for Airman Knowledge Testing contains listings of learning statements with their associated codes. Matching the learning statement codes with the codes listed on your Airman Knowledge Test Report assists in the evaluation of knowledge areas missed on your exam. It is available at: http://www.faa.gov/training_testing/testing/airmen/media/LearningStatementReferenceGuide.pdf

SAMPLE AMA EXAM:

1. AMA102

Any wooden member that has been overstressed is subject to which type of failure?

- A) Bond failure.
- B) Compression failure.
- C) Finish failure.

2. AMA040

Moisture, mildew, chemicals, and acids have no effect on

- A) glass fabric.
- B) linen fabric.
- C) dacron fabric.

3. AMA088

If registration numbers are to be applied to an aircraft with a letter height of 12 inches, what is the minimum space required for the registration mark N1683C?

Note:

- $\frac{2}{3} \times \text{height} = \text{character width.}$
- $\frac{1}{6} \times \text{height} = \text{width for 1.}$
- $\frac{1}{4} \times \frac{2}{3} \text{ height} = \text{spacing.}$
- $\frac{1}{6} \times \text{height} = \text{stroke or line width.}$
- A) 52 inches.
- B) 48 inches.
- C) 57 inches.

4. AMA037

When inspecting a composite panel using the ring test/tapping method, a dull thud may indicate

- A) less than full strength curing of the matrix.
- B) separation of the laminates.
- C) an area of too much matrix between fiber layers.

5. AMA094

Longitudinal (fore and aft) structural members of a semi monocoque fuselage are called

- A) spars and ribs.
- B) longerons and stringers.
- C) spars and stringers.

6. AMA037

The length of time that a catalyzed resin will remain in a workable state is called the

- A) pot life.
- B) shelf life.
- C) service life.

7. AMA037

Sandwich panels made of metal honeycomb construction are used on modern aircraft because this type of construction

- A) is lighter than single sheet skin of the same strength and is more corrosion resistant.
- B) may be repaired by gluing replacement skin to the inner core material with thermoplastic resin.
- C) has a high strength to weight ratio.

8. AMA037

Repairing advanced composites using materials and techniques traditionally used for fiberglass repairs is likely to result in

- A) restored strength and flexibility.
- B) improved wear resistance to the structure.
- C) an unairworthy repair.

9. AMA021

The primary alloying agent of 2024-T3 is indicated by the number

- A) 2.
- B) 20.
- C) 24.

10. AMA021

Which part of the 2017-T36 aluminum alloy designation indicates the primary alloying agent used in its manufacture?

- A) 2.
- B) 17.
- C) 20.

11. AMA017

Clad aluminum alloys are used in aircraft because they

- A) can be heat treated much easier than the other forms of aluminum.
- B) are less subject to corrosion than uncoated aluminum alloys.
- C) are stronger than unclad aluminum alloys.

12. AMA021

Which part(s) of a semi monocoque fuselage prevent(s) tension and compression from bending the fuselage?

- A) The fuselage covering.
- B) Longerons and stringers.
- C) Bulkheads and skin.

13. AMA017

Under certain conditions, type A rivets are not used because of their

- A) low strength characteristics.
- B) high alloy content.
- C) tendency toward embrittlement when subjected to vibration.

14. AMA007

What is indicated by a black 'smoky' residue streaming back from some of the rivets on an aircraft?

- A) The rivets were excessively work hardened during installation.
- B) Exfoliation corrosion is occurring inside the structure.
- C) Fretting corrosion is occurring between the rivets and the skin.

15. AMA011

One of the main advantages of Hi-Lok type fasteners over earlier generations is that

- A) they can be removed and reused again.
- B) the squeezed on collar installation provides a more secure, tighter fit.
- C) they can be installed with ordinary hand tools.

16. AMA101

In gas welding, the amount of heat applied to the material being welded is controlled by the

- A) amount of gas pressure used.
- B) size of the tip opening.
- C) distance the tip is held from the work.

17. AMA101

When a butt welded joint is visually inspected for penetration,

- A) the penetration should be 25 to 50 percent of the thickness of the base metal.
- B) the penetration should be 100 percent of the thickness of the base metal.
- C) look for evidence of excessive heat in the form of a very high bead.

18. AMA101

Which statement best describes magnesium welding?

- A) Magnesium can be welded to other metals.
- B) Filler rod should be nickel steel.
- C) Filler rod should be the same composition as base metal.

19. AMA011

Which is an acceptable safety device for a castle nut when installed on secondary structures?

- A) Star washer.
- B) Lockwasher.
- C) Cotter pin.

20. AMA081

If the travel of an airplane's controls is correct but the cables are rigged exceptionally tight, what probable effect will this have when flying the airplane?

- A) The airplane will tend to fall off on one wing.
- B) The airplane will be heavy on the controls.
- C) The pilot will be unable to fly the airplane hands off.

21. AMA092

Placing a piece of cloth around a stainless steel control cable and running it back and forth over the length of the cable is generally a satisfactory method of

- A) applying methyl-ethyl-ketone.
- B) inspecting for broken strands.
- C) inspecting for wear or corrosion.

22. AMA001

The purpose of wing slats is to

- A) reduce stalling speed.
- B) decrease drag.
- C) increase speed on takeoff.

23. AMA081

Rigging and alignment checks should not be undertaken in the open; however, if this cannot be avoided, the aircraft should be positioned

- A) obliquely into the wind.
- B) facing any direction since it makes no difference if the wind is steady (not gusting).
- C) with the nose into the wind.

24. AMA091

What is the purpose of the free wheeling unit in a helicopter drive system?

- A) It disconnects the rotor whenever the engine stops or slows below the equivalent of rotor RPM.
- B) It releases the rotor brake for starting.
- C) It relieves bending stress on the rotor blades during starting.

25. AMA091

The auxiliary (tail) rotor of a helicopter permits the pilot to compensate for and/or accomplish which of the following?

- A) Attitude and airspeed.
- B) Lateral and yaw position.
- C) Torque and directional control.

26. AMA088

Which statement about Airworthiness Directives (AD's) is true?

- A) AD's are information alert bulletins issued by the airframe, powerplant, or component manufacturer.
- B) Compliance with an AD is not mandatory unless the aircraft affected is for hire.
- C) Compliance with an applicable AD is mandatory and must be recorded in the maintenance records.

27. AMA063

A flexible hydraulic hose identified as MIL-H-8788 will have a stripe running the length of the hose. This stripe

- A) is used to ensure that the hose is installed without excessive twisting.
- B) identifies that the hose is for high pressure fluids, with a 60 degree flexing range.
- C) identifies that the hose is constructed of Teflon and is suitable for a wide temperature range.

28. AMA097

When a properly operating fusible plug has allowed a tire to deflate, the tire should be

- A) replaced.
- B) externally inspected for damage.
- C) removed from the wheel and inspected for carcass and tread damage.

29. AMA068

When an empty shock strut is filled with fluid, care should be taken to extend and compress the strut completely at least two times to

- A) thoroughly lubricate the piston rod.
- B) force out any excess fluid.
- C) ensure proper packing ring seating and removal of air bubbles.

30. AMA069

After performing maintenance on an aircraft's landing gear system which may have affected the system's operation, it is usually necessary to

- A) conduct a flight test.
- B) re-inspect the area after the first flight.
- C) make an operational check with the aircraft on jacks.

31. AMA068

A landing gear position and warning system will provide a warning in the cockpit when the throttle is

- A) retarded and gear is not down and locked.
- B) advanced and gear is down and locked.
- C) retarded and gear is down and locked.

32. AMA097

Excessive wear in the center of the tread of an aircraft tire is an indication of

- A) incorrect camber.
- B) excessive toe out.
- C) overinflation.

33. AMA065

How can it be determined that all air has been purged from a master cylinder brake system?

- A) By operating a hydraulic unit and watching the system pressure gauge for smooth, full scale deflection.
- B) By noting whether the brake is firm or spongy.
- C) By noting the amount of fluid return to the master cylinder upon brake release.

34. AMA097

Why do tire and wheel manufacturers often recommend that the tires on split rim wheels be deflated before removing the wheel from the axle?

- A) To relieve the strain on the wheel retaining nut and axle threads.
- B) As a safety precaution in case the bolts that hold the wheel halves together have been damaged or weakened.
- C) To remove the static load imposed upon the wheel bearings by the inflated tire.

35. AMA064

Phosphate ester base hydraulic fluid is very susceptible to contamination from

- A) teflon seal material.
- B) water in the atmosphere.
- C) ethylene propylene elastomers.

36. AMA064

How can the proper hydraulic fluid to be used in an airplane be determined?

- A) Refer to the aircraft parts manual.
- B) Consult the aircraft Type Certificate Data Sheet.
- C) Consult the aircraft manufacturer's service manual.

37. AMA064

The internal resistance of a fluid which tends to prevent it from flowing is called

- A) volatility.
- B) viscosity.
- C) acidity.

38. AMA079

Pneumatic systems utilize

- A) return lines.
- B) relief valves.
- C) diluter valves.

39. AMA063

Which allows free fluid flow in one direction and no fluid flow in the other direction?

- A) Check valve.
- B) Metering piston.
- C) Shutoff valve.

40. AMA065

To prevent external and internal leakage in aircraft hydraulic units, the most commonly used type of seal is the

- A) O ring seal.
- B) gasket seal.
- C) chevron seal.

41. AMA065

To protect packing rings or seals from damage when it is necessary to install them over or inside threaded sections, the

- A) threaded section should be coated with a heavy grease.
- B) packings should be stretched during installation to avoid contact with the threads.
- C) threaded section should be covered with a suitable sleeve.

42. AMA063

The installation of a new metal hydraulic line should be made with

- A) a straight tube to withstand the shocks and vibration to which it will be subjected.
- B) a straight tube to permit proper alignment of the fitting and thereby reduce fluid loss through leakage.
- C) enough bends to allow the tube to expand and contract with temperature changes and to absorb vibration.

43. AMA011

(Refer to Airframe figure 11.) Which fitting is an AN flared tube fitting?

- A) 1.
- B) 2.
- C) 3.

44. AMA064

(1) When servicing aircraft hydraulic systems, use the type fluid specified in the aircraft manufacturer's maintenance manual or on the instruction plate affixed to the reservoir or unit.

(2) Hydraulic fluids for aircraft are dyed a specific color for each type of fluid.

Regarding the above statements,

- A) only No. 1 is true.
- B) only No. 2 is true.
- C) both No. 1 and No. 2 are true.

45. AMA080

The cabin pressure of an aircraft in flight is maintained at the selected altitude by

- A) controlling the air inflow rate.
- B) inflating door seals and recirculating conditioned cabin air.
- C) controlling the rate at which air leaves the cabin.

46. AMA074

The main cause of contamination in gaseous oxygen systems is

- A) moisture.
- B) dust and other airborne particulates.
- C) other atmospheric gases.

47. AMA080

The altitude controller maintains cabin altitude by modulation of the

- A) safety and outflow valves.
- B) safety valve.
- C) outflow valve.

48. AMA002

When checking a freon system, a steady stream of bubbles in the sight gauge indicates the charge is

- A) high.
- B) correct.
- C) low.

49. AMA080

The purpose of pressurizing aircraft cabins is to

- (1) create the proper environment for prevention of hypoxia.
- (2) permit operation at high altitudes.

Regarding the above statements,

- A) only No. 1 is true.
- B) only No. 2 is true.
- C) both No. 1 and No. 2 are true.

50. AMA072

In the diluter demand oxygen regulator, when does the demand valve operate?

- A) When the diluter control is set at normal.
- B) When the user demands 100 percent oxygen.
- C) When the user breathes.

51. AMA074

If oxygen bottle pressure is allowed to drop below a specified minimum, it may cause

- A) the pressure reducer to fail.
- B) the automatic altitude control valve to open.
- C) moisture to collect in the bottle.

52. AMA063

The operating mechanism of most hydraulic pressure gauges is

- A) a Bourdon tube.
- B) an airtight diaphragm.
- C) an evacuated bellows filled with an inert gas to which suitable arms, levers, and gears are attached.

53. AMA014

A barometric altimeter indicates pressure altitude when the barometric scale is set at

- A) 29.92 inches Hg.
- B) 14.7 inches Hg.
- C) field elevation.

54. AMA036

Which of the following causes of aircraft magnetic compass inaccuracies may be compensated for by mechanics?

- A) Deviation.
- B) Magnetic compass current.
- C) Variation.

55. AMA090

When installing an instrument in an aircraft, who is responsible for making sure it is properly marked?

- A) The aircraft owner.
- B) The instrument installer.
- C) The instrument manufacturer.

56. AMA090

A certificated mechanic with airframe and powerplant ratings may

- A) perform minor repairs to aircraft instruments.
- B) perform minor repairs and minor alterations to aircraft instruments.
- C) not perform repairs to aircraft instruments.

57. AMA023

An aircraft antenna installation must be grounded

- A) to the airframe.
- B) to the engine.
- C) to the radio rack.

58. AMA086

The preferred location of an ELT is

- A) where it is readily accessible to the pilot or a member of the flightcrew while the aircraft is in flight.
- B) as far aft as possible.
- C) as far aft as possible, but forward of the vertical fin.

59. AMA025

What is the primary purpose of an autopilot?

- A) To relieve the pilot of control of the aircraft during long periods of flight.
- B) To fly a more precise course for the pilot.
- C) To obtain the navigational aid necessary for extended overwater flights.

60. AMA085

A DME antenna should be located in a position on the aircraft that will

- A) not be blanked by the wing when the aircraft is banked.
- B) permit interruptions in DME operation.
- C) eliminate the possibility of the DME locking on a station.

61. AMA023

When installing a DME antenna, it should be aligned with the

- A) null position.
- B) angle of incidence.
- C) centerline on the airplane.

62. AMA054

The primary purpose of a fuel tank sump is to provide a

- A) positive system of maintaining the design minimum fuel supply for safe operation.
- B) place where water and dirt accumulations in the tank can collect and be drained.
- C) reserve supply of fuel to enable the aircraft to land safely in the event of fuel exhaustion.

63. AMA052

Aircraft defueling should be accomplished

- A) with the aircraft's communication equipment on and in contact with the tower in case of fire.
- B) in a hangar where activities can be controlled.
- C) in the open air for good ventilation.

64. AMA054

Integral fuel tanks on transport aircraft are

- A) usually constructed of nonmetallic material.
- B) readily removed from the aircraft.
- C) formed by the aircraft structure.

65. AMA052

How may the antiknock characteristics of a fuel be improved?

- A) By adding a knock inhibitor.
- B) By adding a knock enhancer.
- C) By adding a fungicide agent.

66. AMA052

If an aircraft is fueled from a truck or storage tank which is known to be uncontaminated with dirt or water, periodic checks of the aircraft's fuel tank sumps and system strainers

- A) can be eliminated except for the strainer check before the first flight of the day and the fuel tank sump check during 100-hour or annual inspections.
- B) are still necessary due to the possibility of contamination from other sources.
- C) can be sharply reduced since contamination from other sources is relatively unlikely and of little consequence in modern aircraft fuel systems.

67. AMA052

A fuel temperature indicator is located in the fuel tanks on some turbine powered airplanes to tell when the fuel may be

- A) getting cold enough to form hard ice.
- B) in danger of forming ice crystals.
- C) about to form rime ice.

68. AMA003

What minimum required markings must be placed on or near each appropriate fuel filler cover on utility category aircraft?

- A) The word 'Avgas' and the minimum fuel grade, and the total fuel tank capacity.
- B) The word 'Avgas' and the minimum fuel grade or designation for the engines, and the usable fuel tank capacity.
- C) The word 'Avgas' and the minimum fuel grade .

69. AMA041

An electrical type fuel quantity indicating system consists of an indicator in the cockpit and a

- A) float operated transmitter installed in the tank.
- B) float resting on the surface of the tank.
- C) float operated receiver installed in the tank.

70. AMA056

What is the primary purpose of the crossfeed system?

- A) To allow the feeding of any engine from any tank.
- B) To allow the feeding of fuel from one tank for defueling.
- C) To provide automatic refueling of a tank to any desired level.

71. AMA054

Why is the main fuel strainer located at the lowest point in the fuel system?

- A) It traps any small amount of water that may be present in the fuel system.
- B) It provides a drain for residual fuel.
- C) It filters and traps all micro organisms that may be present in the fuel system.

72. AMA055

Which of the following would be most useful to locate and troubleshoot an internal fuel leak in an aircraft fuel system?

- A) Aircraft structure repair manual.
- B) Illustrated parts manual.
- C) A fuel system schematic.

73. AMA042

How does the routing of coaxial cables differ from the routing of electrical wiring?

- A) Coaxial cables are routed parallel with stringers or ribs.
- B) Coaxial cables are routed at right angles to stringers or ribs.
- C) Coaxial cables are routed as directly as possible.

74. AMA042

What is the advantage of a circuit breaker when compared to a fuse?

- A) Never needs replacing.
- B) Always eliminates the need of a switch.
- C) Resettable and reusable.

75. AMA041

Where electric cables must pass through holes in bulkheads, formers, ribs, firewalls, etc., the wires should be protected from chafing by

- A) wrapping with electrical tape.
- B) using a suitable grommet.
- C) wrapping with plastic.

76. AMA042

The three kinds of circuit-protection devices used most commonly in aircraft circuits are

- A) circuit breakers, resistors, and current limiters.
- B) circuit breakers, fuses, and current limiters.
- C) circuit breakers, capacitors, and current limiter plug-ins mechanical reset types.

77. AMA043

If the (+) terminal of a voltmeter is connected to the (-) terminal of the source voltage and the (-) terminal of the meter is connected to the (+) terminal of the source voltage, the voltmeter will read

- A) correctly.
- B) low voltage.
- C) backwards.

78. AMA054

The generator rating is usually found stamped on the

- A) firewall.
- B) generator.
- C) engine.

79. AMA039

Some electric motors have two sets of field windings wound in opposite directions so that the

- A) speed of the motor can be more closely controlled.
- B) power output of the motor can be more closely controlled.
- C) motor can be operated in either direction.

80. AMA043

What type of instrument is used for measuring very high values of resistance?

- A) Megohmmeter.
- B) Shunt type ohmmeter.
- C) Multimeter.

81. AMA041

The starting current of a series wound dc motor, in passing through both the field and armature windings, produces a

- A) low starting torque.
- B) speed slightly higher when unloaded.
- C) high starting torque.

82. AMA042

Electric circuits are protected from overheating by means of

- A) thermocouples.
- B) shunts.
- C) fuses.

83. AMA041

Electric wire terminals for most aircraft applications must be what type?

- A) Slotted.
- B) Hook.
- C) Ring.

84. AMA054

What is a cause of generator brush arcing?

- A) Seating brushes with No. 000 sandpaper.
- B) Carbon dust particles.
- C) Low spring tension.

85. AMA041

Aircraft electrical junction boxes located in a fire zone are usually constructed of

- A) asbestos.
- B) cadmium plated steel.
- C) stainless steel.

86. AMA041

When handling a high voltage capacitor in an electrical circuit, be sure it

- A) has a full charge before removing it from the circuit.
- B) has at least a residual charge before removing it from the circuit.
- C) is fully discharged before removing it from the circuit.

87. AMA041

AN/MS electrical connectors are specifically designed to meet

- A) Technical Standard Order (TSO) specifications.
- B) military specifications.
- C) International Civil Aviation Organization (ICAO) standards.

88. AMA041

How should the splices be arranged if several are to be located in an electrical wire bundle?

- A) Staggered along the length of the bundle.
- B) Grouped together to facilitate inspection.
- C) Enclosed in a conduit.

89. AMA041

For general electrical use in aircraft, the acceptable method of attaching a terminal to a wire is by

- A) crimping.
- B) soldering.
- C) crimping and soldering.

90. AMA068

Which of the following conditions is most likely to cause the landing gear warning signal to sound?

- A) Landing gear locked down and throttle advanced.
- B) Landing gear locked down and throttle retarded.
- C) Landing gear not locked down and throttle retarded.

91. AMA031

An antiskid system is

- A) a hydraulic system.
- B) an electrohydraulic system.
- C) an electrical system.

92. AMA031

(1) An antiskid system is designed to apply enough force to operate just below the skid point.

(2) A warning lamp lights in the cockpit when the antiskid system is turned off or if there is a system failure.

Regarding the above statements,

- A) only No. 1 is true.
- B) only No. 2 is true.
- C) both No. 1 and No. 2 are true.

93. AMA068

Landing gear warning systems usually provide which of the following indications?

- A) Red light for unsafe gear, no light for gear down, green light for gear up.
- B) Green light for gear up and down, red light for unsafe gear.
- C) Red light for unsafe gear, green light for gear down, no light for gear up.

94. AMA032

Antiskid braking systems are generally armed by

- A) a centrifugal switch.
- B) a switch in the cockpit.
- C) the rotation of the wheels above a certain speed.

95. AMA033

What icing condition may occur when there is no visible moisture present?

- A) Injector ice.
- B) Inlet ice.
- C) Carburetor ice.

96. AMA041

What maintains normal windshield temperature control in an electrically heated windshield system?

- A) Thermal overheat switches.
- B) Thermistors.
- C) Electronic amplifiers.

97. AMA020

Prior to installation of a pneumatic surface-bonded type deicer boots, on the leading edge of the wing, you should

- A) remove all paint from the area to be covered by the deicer boot.
- B) apply adhesive to the back of the deicer boot and leading edge of the wing.
- C) apply a silastic compound between the boot and the wing skin.

98. AMA047

Maintenance of fire detection systems includes the

- A) repair of damaged sensing elements.
- B) removal of excessive loop or element material.
- C) replacement of damaged sensing elements.

99. AMA046

A contaminated carbon monoxide portable test unit would be returned to service by

- A) heating the indicating element to 300 °F to reactivate the chemical.
- B) installing a new indicating element.
- C) evacuating the indicating element with CO₂.

100. AMA095

Smoke detectors which use a measurement of light transmissibility in the air are called

- A) electromechanical devices.
- B) photoelectrical devices.
- C) visual devices.